#### **DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-013253 Address: 333 Burma Road **Date Inspected:** 31-Mar-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Du Zhi Qun **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS: Delayed / Cancelled:** Yes No N/A

34-0006 **Bridge No: Component:** Tower

### **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

#### BAY 10:

This QA Inspector performed random Visual Inspection and Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6028 (MT) report for this date. The member is identified as South Tower lift 4 fit lug, diaphragm and skin A, B, C, D, E. The weld designations reviewed are as follows.

SSTL4-1I/L-49, 50, 51, 42, 43, SSTL4-1I/L-53, 54, 56, SSTL4-1I/L-64, 65, 66, 143 SSTL4-1I/L-9, 10, 11, 16, 17, SSTL4-1I/L-27, 28, 29, 135 M Bottom.

SSTL4-1I/L-101, 110, 111, 112, 109 SSTL4-1I/L-115, 116, 117 SSTL4-1I/L-124, 125, 145,

SSTL4-1I/L-75, 76, 77, 79, 80, 81 SSTL4-1I/L-92, 93, 94 **135M TOP** 

NDT Notification No-005444

This QA Inspector performed random Visual Inspection and Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6028 (MT) report for this date. The member is identified as North Tower lift 4 A/E corner seam (Inside). 119M, 123M, 127M, 131M, 143M. Double diaphragm area only, The weld designations reviewed are as follows.

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NSTL4-3B/L-3B

NDT Notification No-005446

This QA Inspector performed Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6027 (UT) report for this date. The member is identified as Tower Strut Lift 4. The weld designations reviewed are as follows.

ED1-STSA4-6-127M-2-2A/B, 4A/B

ND1-STSA4-6-127M-1, 2-2A/B, 4A/B

ED1-STSA4-6-131M-1, 2-2A/B, 4A/B

ND1-STSA4-10-119M-1, 2-5A/B, 6A/B

NDT Notification No-005453

This QA Inspector observed the following work in progress:

**BAY 11** 

Repair Welding

This QA Inspector observed ZPMC qualified welding personnel identified as 040723, 046706. Perform Flux Core Arc Welding (FCAW) on West tower lift 4 C/D corner Diagonal stiffener. Item identified as WSTL4-2D/L-1, 38. ZPMC QC Identified as Lilin, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-FCAW-3G 3F)-Repair.

#### Repair Welding

This QA Inspector observed ZPMC qualified welding personnel identified as 040713. Perform Flux Core Arc Welding (FCAW) on West tower lift 4 B/C corner Diagonal stiffener. Item identified as WSTL4-2D/L-52. ZPMC QC Identified as Lilin, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-FCAW-3G 3F)-Repair.

This QA Inspector observed during random Visual inspection ZPMC Ultrasonic Testing (UT) inspector performing UT on Tower strut flange, item identified as ED1-STSA4-6-127M-2-2A/B. For more information see below attached photo.

#### BAY 10:

Repair Welding

This QA Inspector observed ZPMC qualified welding personnel identified as 053870, 040533. Perform Flux Core Arc Welding (FCAW) on North tower lift 4 B/C corner Diagonal stiffener. Item identified as NSTL4-3D/L-25, 58. ZPMC QC Identified as Li Peng Fei, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-FCAW-3G 3F)-Repair.

Repair Welding

This QA Inspector observed ZPMC qualified welding personnel identified as 053869. Perform Flux Core Arc Welding (FCAW) on North tower lift 4 A/E corner joint. Joint identified NSTL4-3B/L-3B, ZPMC QC Identified Li Peng Fei. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS345-FCAW-2G (2F) Repair.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

# WELDING INSPECTION REPORT

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## **Summary of Conversations:**

Only general conversation was held between QA and QC concerning this project.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Skyler Guest phone: 15000422360, who represents the Office of Structural Materials for your project.

Inspected By:	Gaikwad,Shailesh	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer